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UNCLAS SECTION 01 OF 03 HONG KONG 000146

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TAGS: [CM](#) [ECON](#) [ENRG](#) [HK](#) [PBTS](#) [SENV](#) [SOCI](#) [TPHY](#) [KGHG](#)

SUBJECT: HONG KONG WATER SECURITY: REDUCING DEPENDENCE ON  
GUANGDONG

11. SUMMARY: Despite a guaranteed water supply from Guangdong province, Hong Kong's heavy reliance on its northern neighbor has driven the Special Administrative Region (SAR) to initiate several new water conservation measures. This new policy is prompted not by costs or desire to be a "good partner in the Pearl River Delta" but concerns over Guangdong's ability to meet Hong Kong's clean water needs in the future. Water tariff reform, a long-term water management strategy, and direct involvement in mainland China's water management are expected to help ensure Hong Kong's water security. END SUMMARY

12. A recent severe drought in Guangdong province and well-publicized water shortages in mainland China increased local concerns that Hong Kong was overly dependent on Guangdong for its water. EconOff met with Hong Kong's Water Supplies Department (WSD), NGOs (Greenpeace and WWF) and a leading independent think tank, Civic Exchange for an assessment of the reliability of mainland China as a water source and Hong Kong's plans to reduce its dependence on Guangdong.

Hong Kong Reliant on Mainland China for Water  
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13. Securing Hong Kong's water supply has always been a challenge for the government. Until the 1980s, annual water shortages were serious enough to require frequent water rationing. In 1950s and 1960s, Hong Kong started using sea water for toilet flushing, began building new reservoirs, and negotiated water imports from Guangdong province. Rapid urbanization and industrialization in Guangdong and the cities along the Dongjiang (East River) tributary of the Pearl River have increased the region's demand for water. Diminished water quality from agricultural, municipal and industrial pollution, as well as water loss from flooding, droughts and climate change related impacts have added to the pressures on regional water resources.

14. Hong Kong currently imports 70 to 80 percent of its fresh water from Guangdong. Under the current agreement, Guangdong guarantees Hong Kong a maximum of 1.1 billion cubic meters (BCM) of raw fresh water each year for a fixed price. According to Hong Kong's Water Supplies Department (WSD) Director Lee Tak Ma, Hong Kong in recent years has not exceeded its maximum allotment. Hong Kong's total water imports from Guangdong average between 0.7 to 0.8 BCM. In addition to Guangdong water, Hong Kong also has 17 local rainfall collection reservoirs that can supply up to 0.295 BCM of water per year or 20 to 30 percent of its annual water demand.

¶15. In 2008, Hong Kong consumed a total of 1.231 BCM of water (0.956 BCM of fresh water and 0.275 BCM of sea water) or 175.8 cubic meters (or 175.8 kiloliters) of water per person per year. Residential use accounts for over half of fresh water usage, given Hong Kong's minimal agricultural sector and shrinking industrial sector. According to 2007 International Water Association (IWA) statistics, Hong Kong ranked fourth amongst all cities in global water consumption.

#### Guangdong Declines Hong Kong's "Good Neighbor Policy"

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¶16. Water shortages in mainland China in 2009 spurred many in Hong Kong to urge the government to temporarily halt its water imports from Guangdong. Lau Nai-keung, a Hong Kong member of the Basic Law Committee of the National People's Congress, Standing Committee and member of the Commission on Strategic Development, in an October 2009 editorial in South China Morning Post urged Hong Kong to adopt a "good-neighbor policy" by drawing on its own reservoir water before tapping Guangdong's supply.

¶17. This "good neighbor policy" proposal gained enough momentum to prompt Hong Kong WSD and Guangdong's Water Supply Board (WSB) to meet in early November 2009. However, the official response from Guangdong after the meeting was that it appreciated the gesture but would continue water deliveries to Hong Kong, which only accounts for three percent of Dongjiang's average annual flow volume. Since then, Guangdong's WSB has implemented a water quality regulation plan to manage water output from three of its reservoirs to meet the needs of the cities in the region, including Hong Kong. Several parties, however, opined that

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the PRC central government was more concerned about the fixed HK\$2.96 billion (approximately US\$384 million) payment it gets Hong Kong and wanted to ensure that the arrangement continued.

#### Future Supply Sufficient, But Conservation a Priority

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¶18. WSD predicted that, with a reference population of 8.4 million and no additional water demand, Hong Kong's annual fresh water demand would grow to 1.315 BCM by 2030. Officials were confident that Hong Kong's water demand could be met by its current arrangement with Guangdong for the next 20 years. Nevertheless, Hong Kong officials have recognized the importance of water conservation and have taken steps to reduce per capita consumption. HKG enacted a Total Water Management (TWM) plan in 2005/2006, aimed at reducing average consumption of fresh water to 130 kiloliters per head per year. The TWM plan aims to optimally balance water demand and water supply using an integrated, multi-sectoral approach that aims at cutting overall waterconsumption by 10-20 percent by 2030.

¶19. On the supply side, Hong Kong is promoting the use of reclaimed water from sewage treatment facilities for toilet flushing and other non-potable uses. WS is also promoting water harvesting and "grey" water recycling, such as the re-use of water from washing machines and bath water, particularly for commercial and industrial use. WSD completed pilot tests in 2007 on sea water desalination by using reverse osmosis technology. These tests confirmed that the technology was viable for Hong Kong, however the cost of desalination was still considerably higher than the cost of fresh water imported from Guangdong. Hong Kong continues to look at new desalinization technology and, if viable and cost effective, would consider a desalinization project as a means to diversify its water supply.

¶10. On the demand side, HKG has been running a public campaign to raise awareness and to encourage voluntary water conservation. WSD distributed information on CDs to students

about water saving tips and has been working with District Councilors to promote smart water usage. HKG established the Green Building Council on November 20, 2009 with the aim of promoting environmentally sound standards and practices in construction, including the installation of water saving devices. The city is currently renovating its aging water mains to reduce water leakage by 0.085 BCM a year. Maintenance is scheduled to be completed by 2015. In addition, WSD is planning to further expand the use of sea water for toilet flushing, currently used by 80 percent of Hong Kong's population.

¶11. Hong Kong officials stated that the SAR's water saving initiatives were driven not just by costs, but also by concerns that future water imports from Guangdong might be unreliable. Officials stressed the need for Hong Kong to be a "good partner to the PRD" as it faced water shortages but were also eager to reduce Hong Kong's dependence on Guangdong water as much as possible. WSD Director Ma was quoted saying that "there is no room for complacency." NGO representatives and researchers echoed this concern for Hong Kong's water future and predicted the likelihood of future intense competition for water resources in mainland China.

#### Hong Kong's Cheap Water Policy

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¶12. According to 2007 IWA statistics, Hong Kong's average annual water tariff ranked very low compared to other major countries and administrative regions. Under Hong Kong's current domestic water pricing scheme, the first 12 cubic meters of water is free, followed by a tiered system that ranges from HK\$4.16 to HK\$9.05 (approximately US\$0.60 to US\$1.17) per cubic meter. According to Civic Exchange, this equates to about a quarter of one percent of an average household's expenditures. This was considerably lower than other major Asian cities where the average monthly water bill accounted for 0.5 to 0.9 percent of household expenditure. In comparison, water bills accounted for 0.5 to 1.5 percent of household expenditures in the U.S. and Europe. According to researchers, the WSD has been running a deficit and has lost more than HK\$300 million (almost US\$3.9 million) in the past two years.

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¶13. WSD has recognized the need for water tariff reform and in 2000 proposed various measures including ending free allowances, stopping subsidies, mandating full recovery of production costs, and proposing direct subsidies only for low-income households. However, the SARS outbreak in 2003 and the subsequent economic fallout in 2003/2004 prompted HKG to shelve the idea of raising tariffs. Hong Kong has continued to provide free allowances and, according to Civic Exchange, as a result subsidizes over half of the community's water charges.

¶14. Faced with doubts about future supply, the concept of pricing to drive water conservation is gathering momentum again. Industry observers believe that a rich city such as Hong Kong should charge more for water and that water usage could be reduced by a third. Officials, when asked about the possibility of implementing tariff reform, told EconOff that it "was not completely off the table."

#### Observers Push for Hong Kong Role in Regional Water Management

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¶15. Industry observers want to see Hong Kong have more direct involvement in decisions that impact its water future. They criticized Hong Kong's lack of a long-term water policy, as it relied only on negotiations of price and quantity of its water supply with Guangdong. They want HKG to view its water supply within the context of South China and to ensure its place within the Pearl River Water Resources Commission and other relevant water management bodies. Although

officials maintained that Hong Kong had strong links with Guangdong counterparts on water management issues, Hong Kong often ended up only playing an observer role in mainland China's water management activities. Observers suggested that Hong Kong should not only urge its own people to consume less water, but also urge Guangdong and the cities along the Dongjiang to work together to better protect the tributary and help transform the PRD region into a "green and quality living area." In addition, HKG could work with Hong Kong owners of Guangdong factories to improve water pollution controls. Observers also encouraged the government to take the lead by using reclaimed water within government buildings and public housing estates and offer developers incentives to install water-saving devices in new developments.

16. WSD Director Ma suggested two areas where Hong Kong could play a role in mainland China's overall water management system. He speculated that Shanghai and Beijing's aging water networks would face problems in the future and that Hong Kong could play a leadership role in managing water supply assets, including network leakage detection, network maintenance and improvement, and water testing, analysis and certification with its modern laboratories. In addition, Hong Kong's use of sea water for toilet flushing was unique in the world. Sharing the latest technology and chemical processes developed by local Hong Kong universities could greatly help coastal communities in mainland China.

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